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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/927,858

08/09/2001

A. Dorian Challoner

PD-990136 (BOE 0146
PA)

7230

7590

05/07/2003

Angela M. Brunetti
Artz & Artz, P.C.
Suite 250
28333 Telegraph Road
Southfield, MI 48034

EXAMINER

FAYYAZ, NASHMIYA SAQIB

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/927,858

Applicant(s)

CHALLONER ET AL.

Examiner

Nashmiya S. Fayyaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 5 and 8, it is still not clear what a "sense axis" designates. Is it the "output" axis of line 3 or 4 or is it in addition to that axis? If so, why is it then being designated as a "sense axis"? On line 7 of claims 1 and 8, is the "misalignment" that of line 5, or is it different, as apparently indicated? In claims 1, 5 and 8, on lines 7-8, is "an electrode" different than that of the "four electrodes" of line 2, as is implied? Also, recitation of "a force in cross axis" is not understood. The designation "cross axis" is not clear and production of "a force in cross axis" is not found in the disclosure. What direction is "cross axis"? In claims 14, "said alignment" lacks clear antecedent basis.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In the specification on p. 13, lines 20-21, it is unclear what is designated by a "cross axis stiffness" or "the cross-coupled electrostatic stiffness" of p. 12, lines 21-24. Further, it is unclear how the recitation on p. 9, lines 18-19 indicates a production of a force perpendicular to

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the electrode plane as indicated in the arguments. Further, the recitation on p. 5, lines 11-12 indicates a counteracting force to a restrain a Coriolis force, but where is there an indication of application of a force perpendicular to the electrode plane?

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cargille-U.S. Patent # 6,164,134.

As to claims 1-18, as best understood, Cargille discloses a balanced vibratory cloverleaf micro-gyroscope having an electrode pattern of four inner drive electrodes and four outer sense electrodes and a control circuit to process output signals and control the drive electrodes, note Fig. 2 and Fig. 4, and col. 3, lines 45 et seq. Further, there is described a tendency for a Coriolis force to cause the baton to move along other axes and electrodes 50/52 sense this tendency to rotate upon "output axis" 30 and usage of a negative feedback loop 68 to provide a corrective, re-balance signal to the first and second rate driving electrodes 46 and 48 to offset movement of the baton, see col. 4, lines 62 et seq. It is noted that misalignment of "a sense axis" is not specifically recited. However, as the 3 axis of the microgyroscope are mutually orthogonal, such a correction would have been obvious to one of ordinary skill in the art at the time of the

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invention as equally applicable to correct the orientation of any "axis" by the application of such a re-balance signal.

5. Applicant's arguments filed 3/24/03 have been fully considered but they are not persuasive. Applicant has provided numerous instances of specific recitations in the disclosure to support claim language. However, as indicated above in paragraph 2, the disclosure fails to support the recitations i.e. indication that the result of applying an electrostatic bias adjustment is the production of a force perpendicular to the electrode plane is not indicated in the disclosure.
6. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.
7. Any inquiry concerning this communication should be directed to N. Fayyaz at telephone number 305-4891.


Fayyaz/ek

04/22/03

HELEN KWOK
PRIMARY EXAMINER

